

ACOUSTIC SAMPLE INTRODUCTION
FOR ANALYSIS AND/OR PROCESSING

ABSTRACT OF THE DISCLOSURE

10 The invention relates to the efficient transport of a small volume of fluid, such as
may be required by mass spectrometers and other devices configured to process and/or
analyze small samples of biomolecular fluids. Such transport involves nozzleless
acoustic ejection. In some instances, sample molecules contained in droplets of fluid are
introduced from a reservoir into an ionization chamber of an analytical device. In other
15 instances, sample molecules are introduced into a small capillary by directing focused
acoustic radiation at a focal point near the surface of a fluid sample. In still other
instances, acoustic ejection is used to form an array on a surface, wherein the features of
the array are ionized for analysis. The invention may be used with microfluidic devices.
Thus, the invention facilitates the processing and/or analysis of various types of samples,
20 such as biomolecules having high molecular weights.